

Large Spark Ignition (LSI) Engine Working Group Meeting

On March 17, 2004, Air Resources Board (ARB) staff conducted the third LSI working group conference call. A discussion of each agenda item follows:

Agenda item	Discussion
Retrofit Verification - General	<ul style="list-style-type: none"> • Verification protocol due out in 2 - 3 weeks • Kit must achieve a percent reduction or a set numerical level (grams per brake horsepower-hour) • Staff leaning towards steady state testing for verification near term and transient testing post 2007 • 80% reduction from baseline seems reasonable • We may have different requirements for equipment that doesn't lend itself to the standard retrofits
Retrofit Verification - Manufacturer of Record / Warranty	<ul style="list-style-type: none"> • Who will be Manufacturer of Record for retrofit kits? • Not sure how much retrofitting will be done post 2007 • Need to make clear retrofit equipment defects warranty and emissions performance warranty - they are different • Defects warranty and in-use checks are separate manufacturer requirements • In-use testing and checks must be robust enough for the some kind of corrective action • All testing performed using a statistical approach (a representative sampling) • Maintenance outliers are not chosen for in-use compliance checks; kit manufacturer not responsible for end-user maintenance • Verification testing based on emissions control group, a range of models determined by the kit manufacturer for which a given kit is effective • Retrofit kit market isn't lucrative enough in the long run for manufacturers to risk a recall if equipment exceeds emissions; the verification itself should give ARB a feel for the system's durability • Isn't the procedure used already for the ECS Terminox kits acceptable? No, it was a demo project, there wasn't a formal verification procedure yet. • Is there a lower-efficiency, lower-cost retrofit option?
U.L Listing	<ul style="list-style-type: none"> • OSHA will shut down truck if not U.L. listed in some applications • Some retrofits may need to be U.L. Listed • Kit manufacturers could identify status of U.L. listing in their emission control group application
Rule structure	<ul style="list-style-type: none"> • Anxious to see overall rule structure • From initial zero-emission concept in SIP, have broadened discussion to look at best way to get SIP reductions while maintaining options and flexibility. A fleet average scenario would allow retrofit, electric, and low-emission equipment to enter the mix. • We're interested in group feedback on the definition of fleet average • We looking at treating rentals as a fleet • Industry interested in fleet average concept